

Violetta Solargear VS12-B60LIM Battery Compartment

Operating Instructions

Thank you very much for purchasing our product. Please read this manual thoroughly before using this product, and retain it for future reference in order to use the product safely, and to make the most of its features. If you use other products together with this product, please read the operating instructions of those products thoroughly before use as well.

Product Summary

A lithium iron battery compartment for dust and waterproof mobile PV systems designed for powering a broad range of appliances. Composed of a combination of an ultra-thin, light and efficient solar panel and a compact, lightweight yet weather resistant battery compartment for versatility, expandability, portability, weather resistance and durability at low cost in disaster prevention, business, leisure and everyday living.

Applications

Charging the built-in lithium iron battery by sunlight, and powering a broad range of appliances through AC100V pure sine wave (inverter outlet, dust and water proof connectors) or DC12V (charge controller terminals, dust and water proof connectors) output. A built-in nightlight function can control DC12V load such as LED light at night and is widely programmable.

Features

- An IP67 dust and water proof Pelican Case with a fail-safe automatic pressure equalization valve as the battery compartment. Equipped with a detachable shoulder strap for easy carrying.
- A built-in lithium iron phosphate oxide battery offers not only high energy density, but also high safety feature, long life, environmental friendly characteristics. Equipped with an automatic heater preventing capacity reduction below the freezing point.
- A built-in Denryo SA-MN05-8 charge controller with only 1mA of self-consumption current to protect the uncharged battery from over-discharging, and with a programmable nightlight function.
- IP68 dust and water proof connectors mating with solar panels, Extension Cables, AC100V Output Cables, DC12V Output Cables and DC Power Cables for weather resistant outdoor installations.
- A 300W silent and power saving pure sine wave DC-AC inverter with an AC100V outlet and AC100V connectors.
- Dust and water proof power supply to appliances with AC100V input with AC100V Output Cables (sold separately).
- Dust and water proof power supply to appliances with DC12V input with DC12V Output Cables (sold separately).
- DC Power Cables (sold separately) to double the output capacity of the batteries.

Important Safety Instructions

Caution Please follow the instructions below. Failure to comply may damage this device, cause the built-in battery to burst or result in leakage, fire and injury.

- Charge only the specified batteries.
- Do not allow metal objects to touch the input/output connectors.
- Do not block the automatic pressure equalization valve on the battery compartment.
- Do not short circuit, or disassemble this device.
- Do not put this device into water.
- Do not use or leave this device near fire.
- Do not use or leave this device in enclosed spaces.
- Do not use or leave this device in unstable high places.
- Stop charging in case of leakage from the battery.
- Stop charging in case the battery becomes unusually hot.

Important Note

We are not responsible for any physical damage to appliances, any loss of memorized data, any interruption of business, and any loss of business opportunities caused by this product.

Specifications

- Built-in battery: lithium iron phosphate oxide battery
- Nominal capacity*: 792Wh (13.2V 60Ah)
- Max output: 300W (AC100V)
17A (DC12V dust and water proof connectors)
8.5A (DC12V charge controller terminals)
- Operating temperature (charge)**: 0 - 45°C
- Operating temperature (discharge)**: -20 - 50°C (AC100V)
-20 - 60°C (DC12V)
- Dimensions (W×D×H): 430×244×341mm
- Weight: approx. 9.9kg (incl. accessories)
- Input/output terminals:
 - Input/output terminals: IP68 dust and water proof connector X 1
 - Output terminals: IP68 dust and water proof connector X 1
AC100V outlet X 1
AC100V connectors X 1
DC12V charge controller terminals X 1
- Safety features:
 - Denryo SA-MN05-8 charge controller
 - 10A fuse X 1 & 20A fuse X 1 for short circuit prevention
- Expected life span: 5 years or more
- Accessories: Denryo GD300NA-112 300W pure sine wave DC-AC inverter
a detachable shoulder strap

*20 hr rate at 25°C **No freezing

Feature Diagram



How to Use

Connecting the solar panel/AC battery charger

- 1 Connect the output cable of the solar panel or AC battery charger to this product. Screw anticlockwise the cover off the dust and water proof connector on the left. Align the ▲ marks of both connectors and screw the ring clockwise tightly by hand.

Charging the built-in Battery

- 1 Open the lid of the battery compartment, and turn on the BMS switch to activate the battery.
- 2 Face the solar panel towards the sunlight, and charge the built-in battery. To mount the solar panel on the fence or on the ground, s-hooks, fixing ties or fixing pegs can be used. Use the AC battery charger in the night and in bad weather.

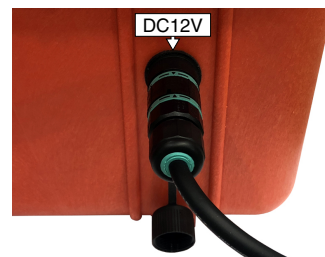
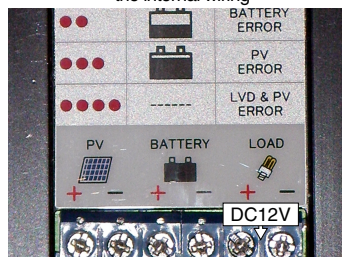
Powering Appliances

- 1 To power appliances with AC100V input indoors, turn on the provided DC-AC inverter, and connect the plug of the appliances to the outlet of the inverter. To power appliances with AC100V input outdoors, connect the AC100V Output Cable (sold separately) to the dust and water proof connector on the right, and the processed end to the appliances.



- 2 To power appliances with DC12V input outdoors, connect the DC12V Output Cable (sold separately) to the dust and water proof connector on the right, and the processed end to the appliances. To power appliances with the programmable nightlight function of the charge controller effective, turn off the BMS switch, disconnect cables from the battery terminals, and connect them to the DC12V load terminals of the built-in charge controller instead.

Caution: To avoid short circuit, make sure to turn off the BMS switch before modifying the internal wiring



- 3 To monitor the status of the solar panel and the battery, press "SELECT SW" (red button) of the built-in charge controller. "STATUS LED" blinks 3 times when battery level is full. It blinks twice when battery level is middle. It blinks once when battery level is low. "ERROR LED" blinks 3 or 4 times when the solar panel has no output. Please refer to the instruction manual of the controller for details.

Note: When you press "MODE SW" (white button), it stops charging. To restart charging, press 1-2 times again until all the LEDs blink twice.

- 4 The battery voltage and output power are indicated by LEDs on the provided DC-AC inverter. Please refer to the instruction manual of the inverter for details.
- 5 After you have finished powering appliances with AC100V input, turn off the provided DC-AC inverter, and disconnect the appliances from the outlet of the inverter or from the dust and water proof connector. After you have finished powering appliances with DC12V input, disconnect the appliances from the dust and water proof connector.
- 6 To keep away from dust and water, and to avoid short circuit, close the lid of the battery compartment and cover the dust and water proof connectors. To protect the built-in battery from over-discharging, charge it as soon as possible after you have finished powering appliances.

Note: To protect the built-in battery from over-discharging, turn off the BMS switch before storing the battery regardless of the storage time.

- 7 You can connect another battery compartment with the DC Power Cable (sold separately) to double the output capacity of the battery.

Maintenance

- To protect the built-in battery from over-discharging, charge it immediately when "STATUS LED" blinks once (Battery Level Low), or "ERROR LED" of the charge controller blinks once or 4 times (LVD = Load Off), or charge it at least every month. Otherwise, the battery may be damaged permanently.
- The life of the built-in battery varies widely depending on the operating environment. Replace the battery every 5 - 10 years, or when the operating time becomes notably short.
- Clean this product with a dried or dampened cloth. Do not use oil, solvents, petrol or paint thinners for cleaning.

Warranty

- 1 year from the date of purchase

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Design and specifications are subject to change without notice.

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